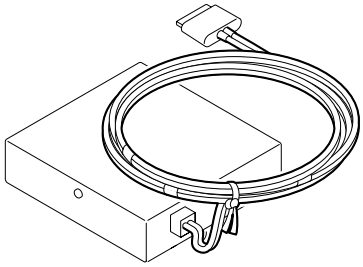
Pioneer *sound.vision.soul*

Service Manual



CD-IB100/XM/E

ORDER NO.
CRT3422

iPod ADAPTER

CD-IB100 /XM/E

For details, refer to "Important check points for good servicing".

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER EUROPE NV Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

© **PIONEER CORPORATION 2005**

K-ZZB. MAR. 2005 Printed in Japan

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

● Service Precaution

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

SAFETY INFORMATION....2
1. SPECIFICATIONS....4
2. EXPLODED VIEWS AND PARTS LIST....5
2.1 PACKING....5
2.2 EXTERIOR....6
3. SCHEMATIC DIAGRAM....8
3.1 SCHEMATIC DIAGRAM (GUIDE PAGE)....8
4. PCB CONNECTION DIAGRAM....14
4.1 MAIN PCB UNIT....14
5. ELECTRICAL PARTS LIST....16
6. ADJUSTMENT....18
7. GENERAL INFORMATION....20
7.1 DIAGNOSIS....20
7.1.1 DISASSEMBLY....20
7.1.2 CONNECTOR FUNCTION DESCRIPTION....21
7.2 IC....22
8. OPERATIONS....24

1. SPECIFICATIONS

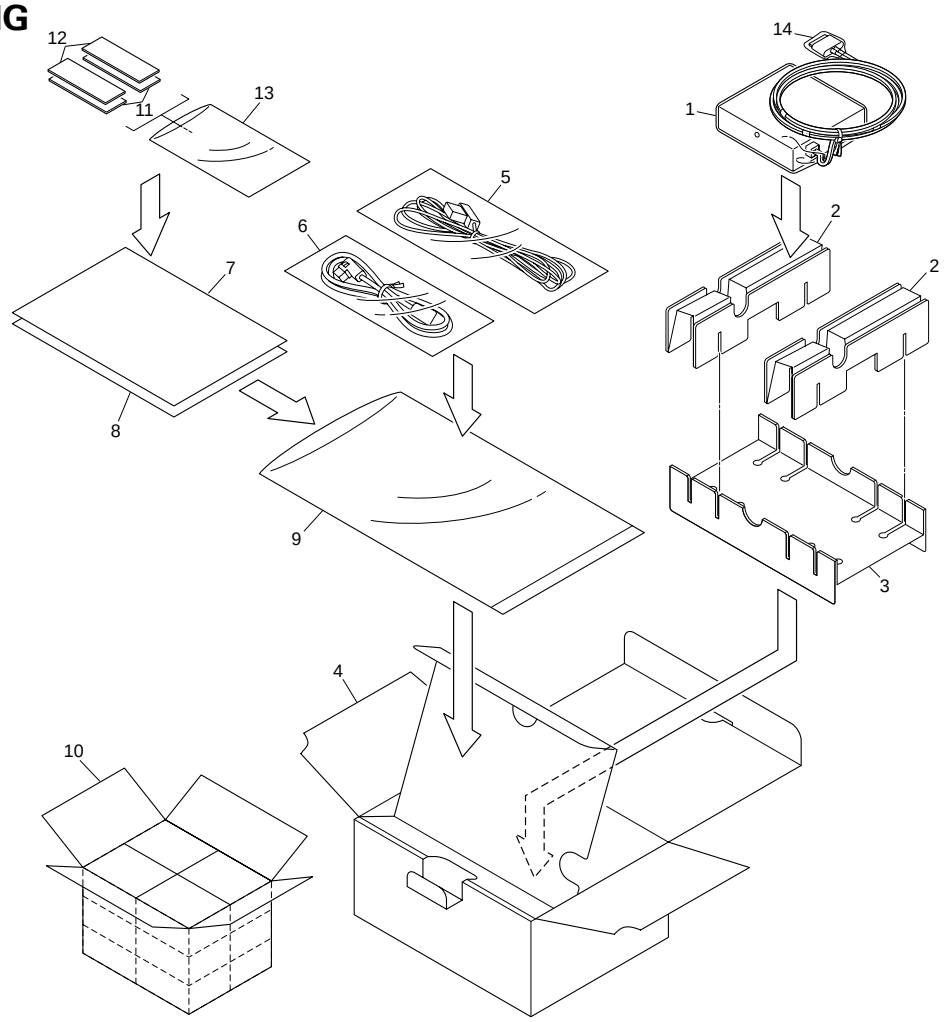
Power source . . . . . .14.4 V DC (10.8 - 15.1 V allowable)
Grounding system . . . . . .Negative type
Max. current consumption . . .2.0 A
Dimensions (W x H x D) . . . .95 x 25 x 91 mm
(3-3/4 x 1 x 3-5/8 in.)
Weight . . . . . .0.32 kg (0.7 lbs)

2. EXPLODED VIEWS AND PARTS LIST

NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

2.1 PACKING



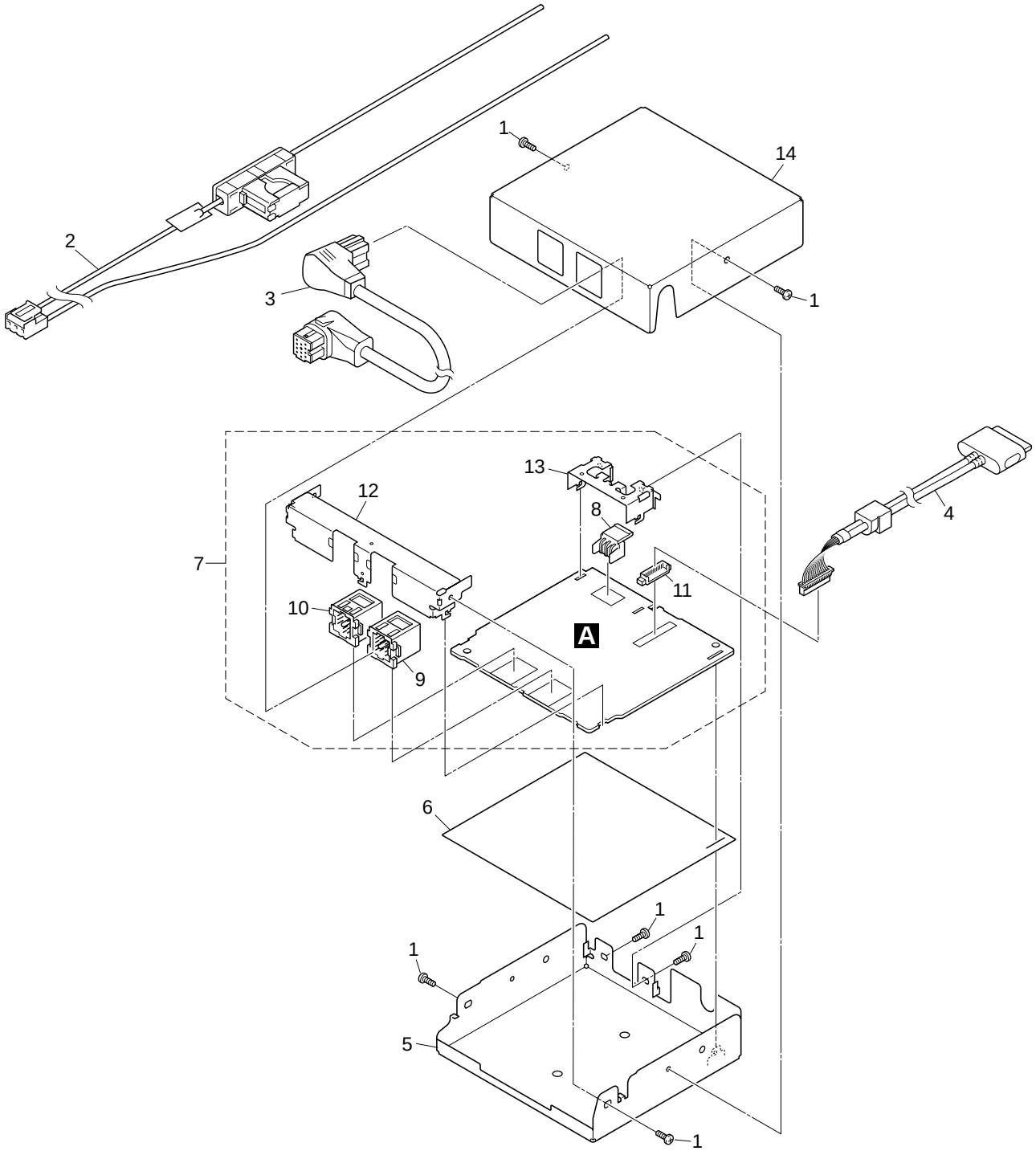
● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Protect Bag	CZE2966
	2	Spacer(S)	CZH6631
	3	Spacer(L)	CZH6632
	4	Carton	CZH6635
	5	DC Cord Assy	CZD2993
	6	BUS Cord Assy	CZD2995
	7	Owner's Manual	CZR2983
	8	Owner's Manual	CZR2984
	9	Polyethylene Bag	CZE2962
	10	Contain Box	CZH6636
*	11	Velcro Fastener(Hard)	CZE2964
*	12	Velcro Fastener(Soft)	CZE2965
*	13	Polyethylene Bag	CZE2967
	14	Polyethylene Bag	CZE2970

● Owner's Manual

Part No.	Language
CZR2983	English, Spanish, German, French, Italian
CZR2984	Dutch, Portuguese(B), Chainese(T), Arabic

2.2 EXTERIOR



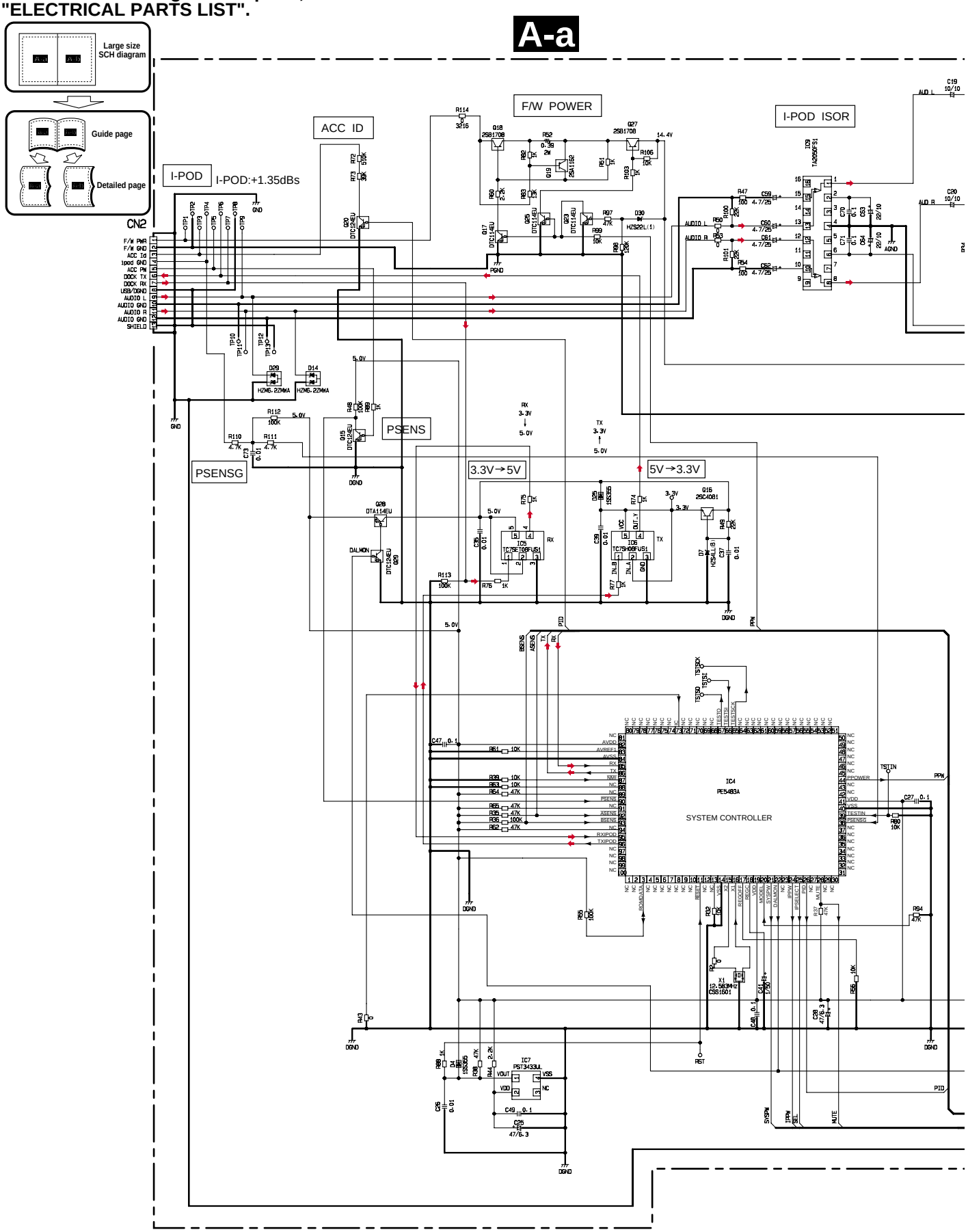
● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BSZ26P060FTC
2	DC Cord Assy	CZD2993
3	BUS Cord Assy	CZD2995
4	I/P Cord Assy	CZD2996
5	Chassis(Bottom)	CZN6966
6	Insulator	CZN6969
7	Main PWB Unit	CZW5553
8	Plug(CN1)	CZK2960
9	Connector(CN4)	CKS3409
10	Connector(CN3)	CKS3414
11	Connector(CN2)	CKS4833
12	Holder(BUS)	CZN6967
13	Holder(Power Supply)	CZN6968
14	Chassis(Top)	CZN6999

3. SCHEMATIC DIAGRAM

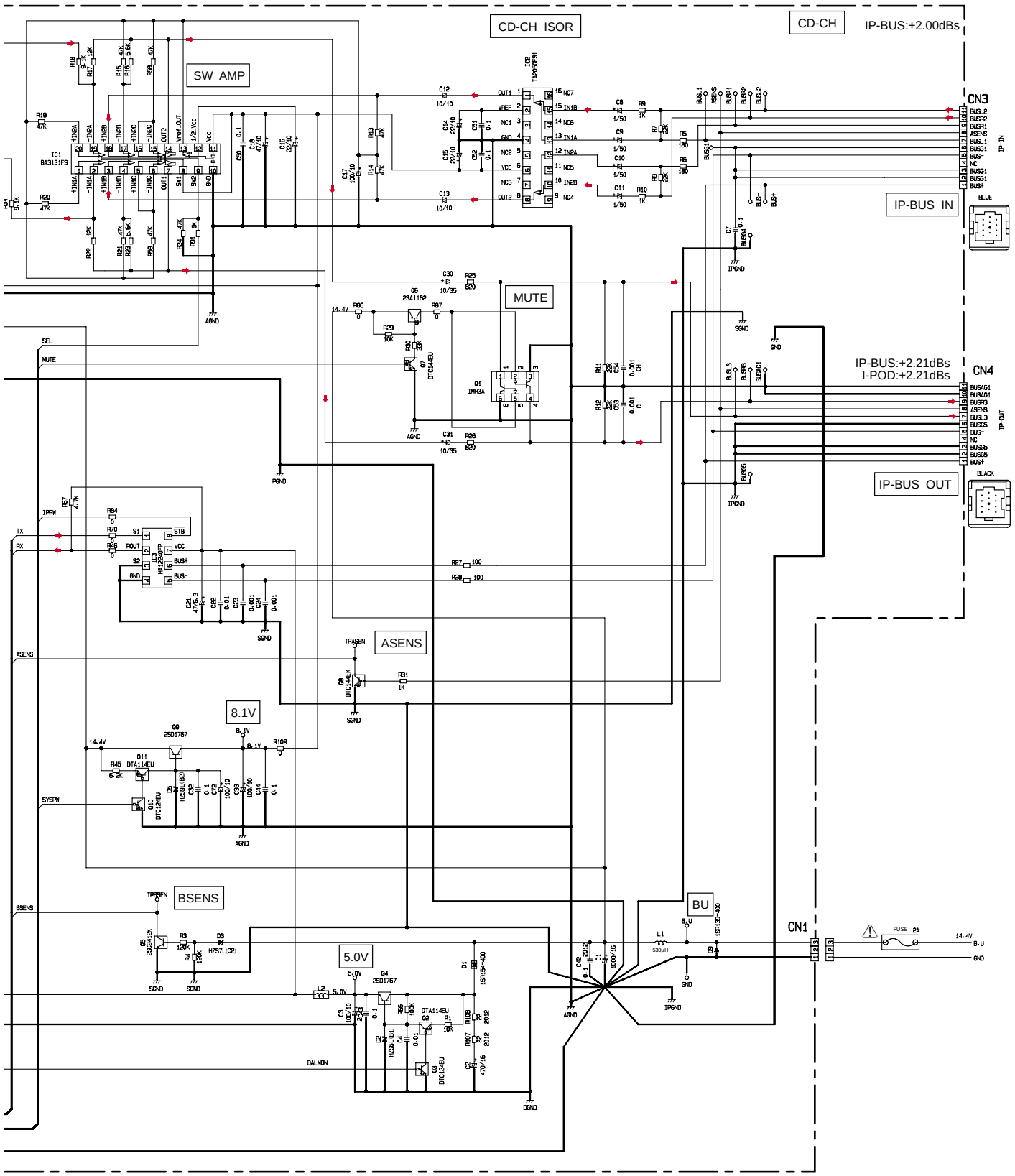
3.1 SCHEMATIC DIAGRAM (GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-b

A MAIN PWB UNIT

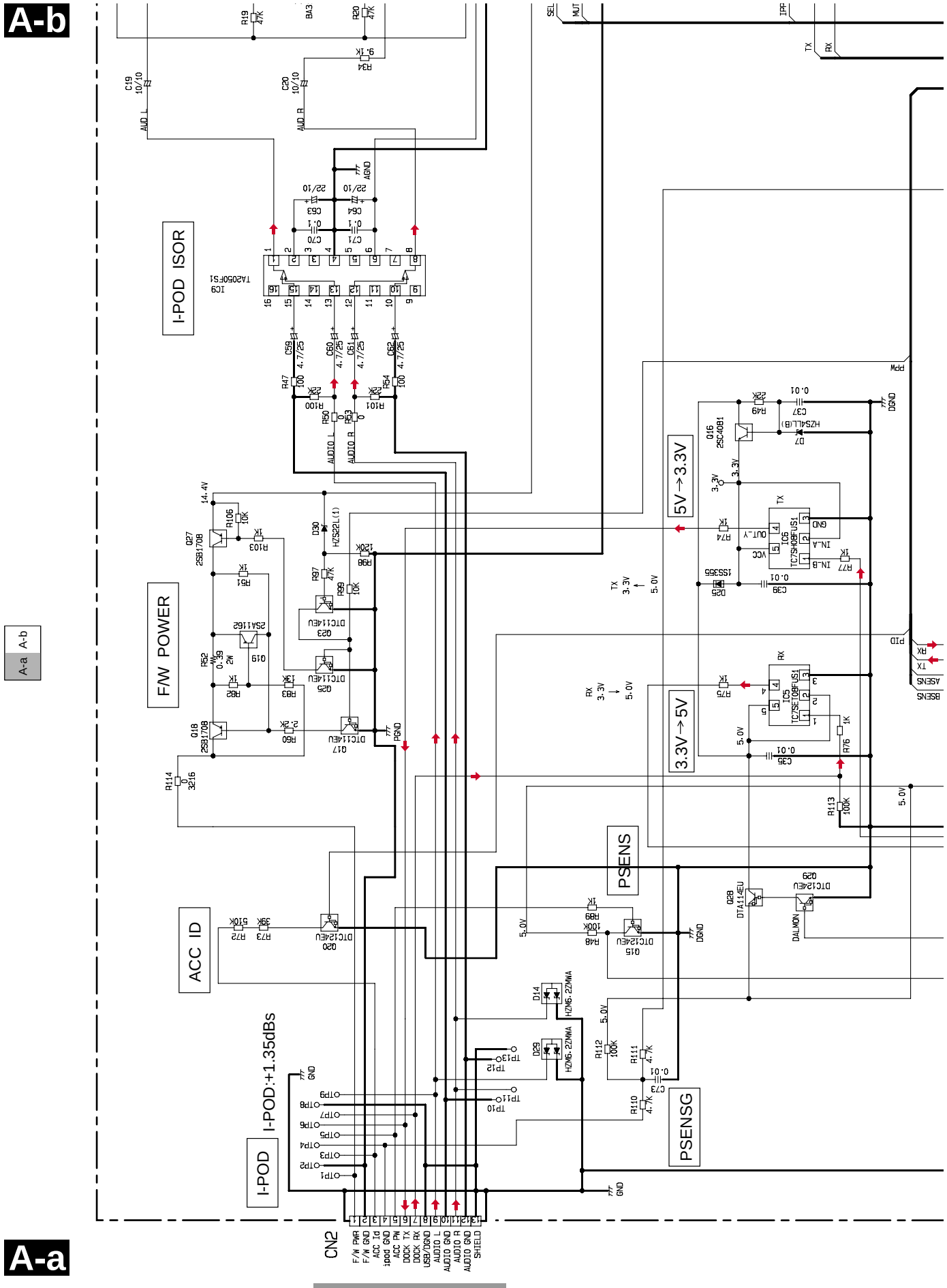


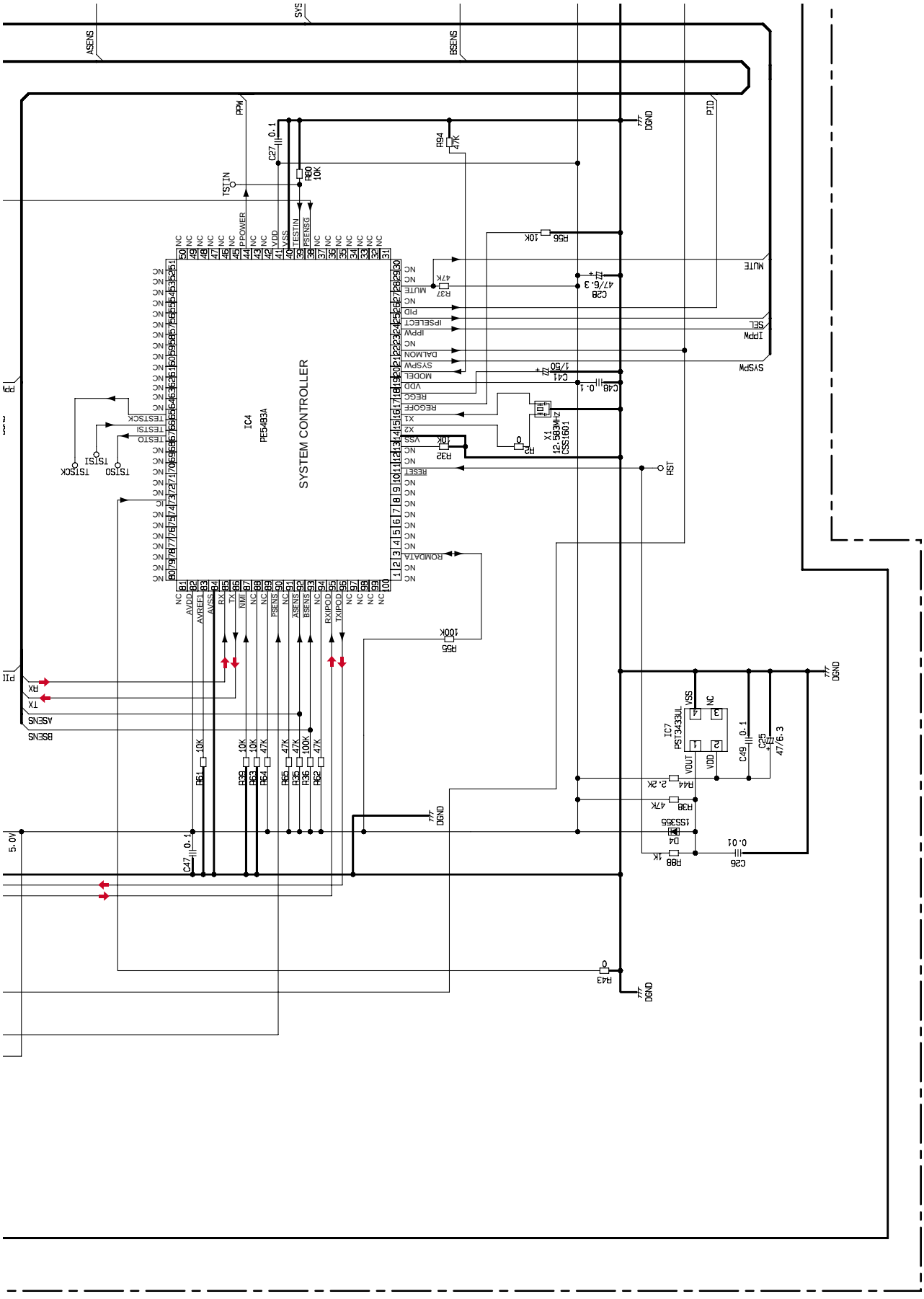
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

NOTE :

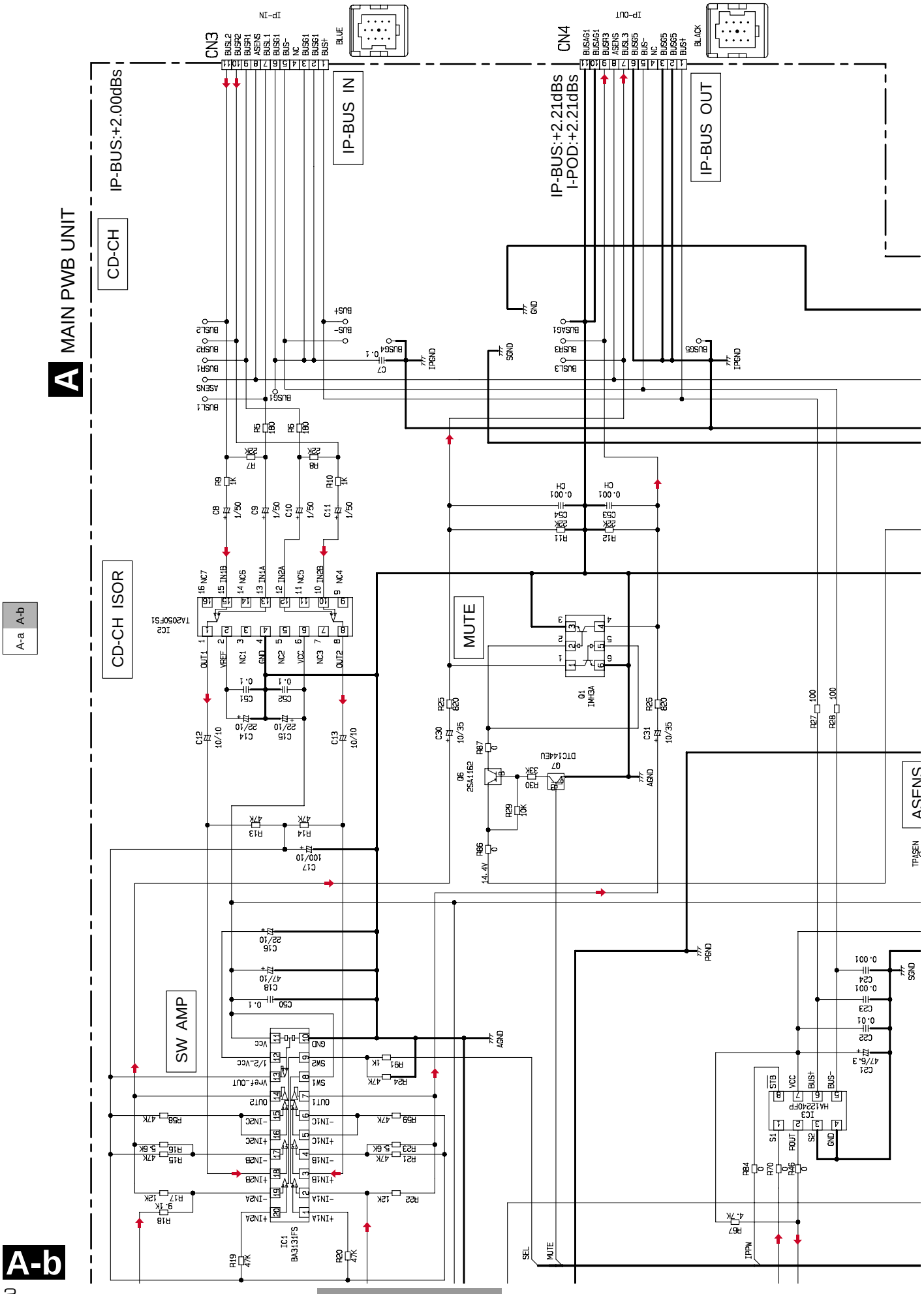
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

A

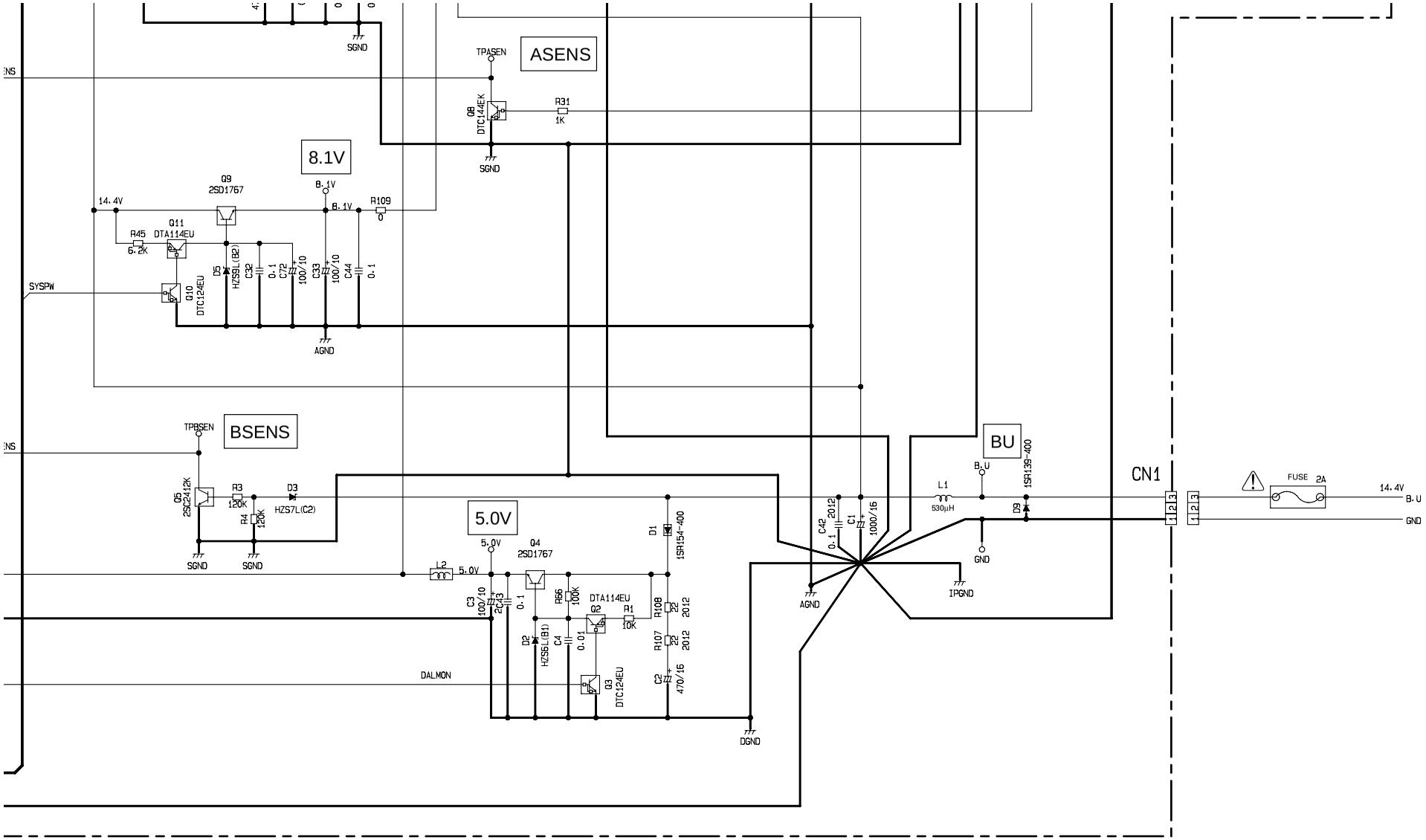

A-b
A-a
I-POD ISOR
F/W POWER
ACC ID
I-POD
I-POD:+1.35dBs
PSENS
PSENSG
5V→3.3V
3.3V→5V
CN2
F/W PWR
F/W GND
ACC Id
ipod GND
ACC PW
DOCK TX
DOCK RX
USB/DGND
AUDIO L
AUDIO GND
AUDIO R
AUDIO GND
SHIELD


SYSTEM CONTROLLER
IC4
PE5483A
ASENS
BSENS
PPM
PID
MUTE
SEL
IPPM
SYSPM
RST
DGND
5.0V
TX
RX
TSTIN
TSTSI
TSTSO
TSTSCK
C27
0.1
R80
10K
R94
47K
R55
100K
R56
10K
R37
47K
C28
47/6.3
C41
1/50
C48
0.1
R32
10K
R2
0
X1
12.583MHz
CSS1601
R43
0
IC7
PST3433UL
VOUT
VDD
C49
0.1
C25
47/6.3
R44
2.2K
R38
47K
D4
1SS355
R88
1K
C26
0.01
C47
0.1
R61
10K
R39
10K
R63
10K
R64
47K
R65
47K
R35
47K
R36
100K
R62
47K

A-a


A MAIN PWB UNIT
IP-BUS:+2.00dBs
CD-CH
CD-CH ISOR
IP-BUS IN
IP-BUS:+2.21dBs
I-POD:+2.21dBs
IP-BUS OUT
CN3
CN4
IP-IN
IP-OUT
BLUE
BLACK
MUTE
SW AMP
ASENS
A-b
A-a
IC1
BA3131FS
IC2
TA2050FS1
IC3
H41224DP
Q1
IM4A
Q5
2SA1162
Q6
DTC144EU
Q7
SEL
MUTE
IPPW
TPASEN
AGND
PGND
SGND
IPGND
GND
14.4V

A-b



The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

A-a A-b

A-b

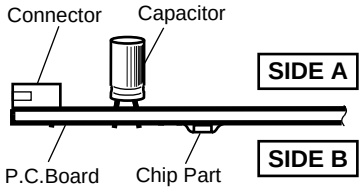
4. PCB CONNECTION DIAGRAM

4.1 Main PWB Unit

NOTE FOR PCB DIAGRAMS

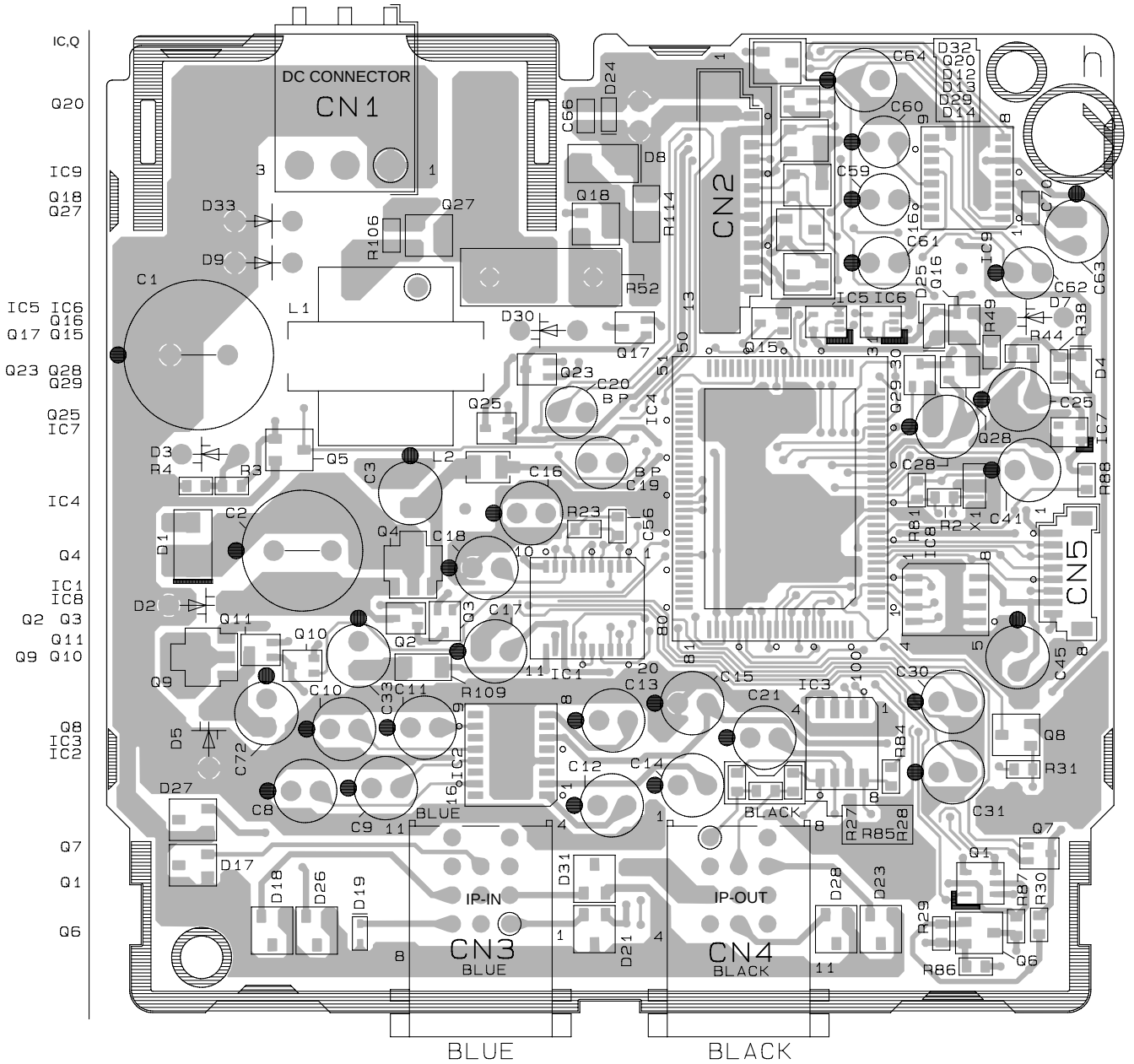
1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams



A MAIN PWB UNIT

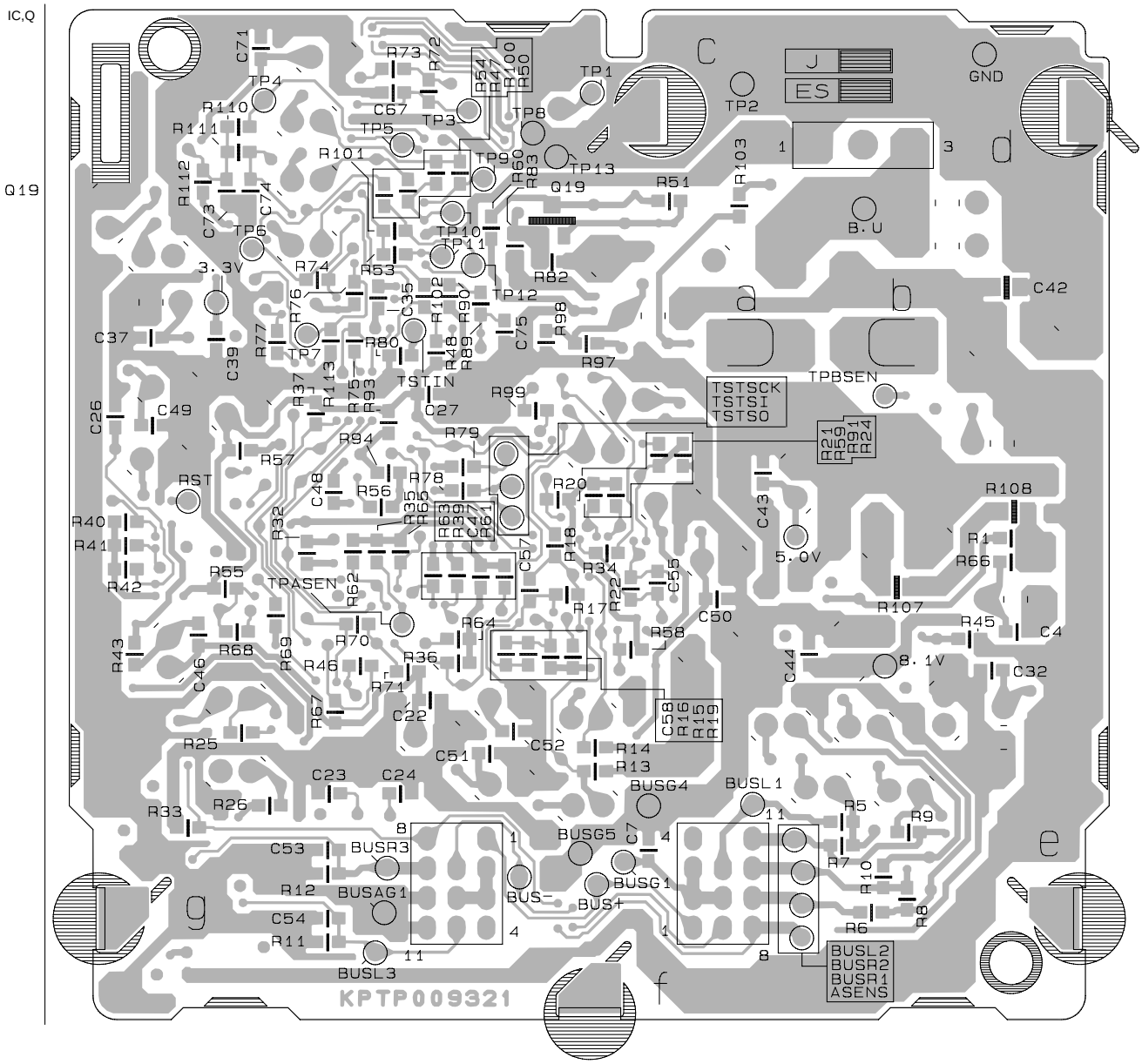
SIDE A



A

A MAIN PWB UNIT

SIDE B



5. ELECTRICAL PARTS LIST

NOTE:
- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

Chip Resistor
RS1/◯S◯◯◯J,RS1/◯◯S◯◯◯J
Chip Capacitor (except for CQS.....)
CKS....., CCS....., CSZS.....

- *The ⚠ mark found on some component parts indicatesthe importance of the safety factor of the part.*

A Unit Number : CZW5553
Unit Name : Main PWB Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	1	IC	BA3131FS
IC	2	IC	TA2050FS1
IC	3	IC	HA12240FP
IC	4	IC	PE5483A
IC	5	IC	TC7SET08FUS1
IC	6	IC	TC7SH08FUS1
IC	7	IC	PST3433UL
IC	9	IC	TA2050FS1
Q	1	Transistor	IMH3A
Q	2	Transistor	DTA114EU
Q	3	Transistor	DTC124EU
Q	4	Transistor	2SD1767
Q	5	Transistor	2SC2412K
Q	6	Transistor	2SA1162
Q	7	Transistor	DTC144EU
Q	8	Transistor	DTC144EK
Q	9	Transistor	2SD1767
Q	10	Transistor	DTC124EU
Q	11	Transistor	DTA114EU
Q	15	Transistor	DTC124EU
Q	16	Transistor	2SC4081
Q	17	Transistor	DTC114EU
Q	18	Transistor	2SB1708
Q	19	Transistor	2SA1162
Q	20	Transistor	DTC124EU
Q	23	Transistor	DTC114EU
Q	25	Transistor	DTC114EU
Q	27	Transistor	2SB1708
Q	28	Transistor	DTA114EU
Q	29	Transistor	DTC124EU
D	1	Diode	1SR154-400
D	2	Diode	HZS6L(B1)
D	3	Diode	HZS7L(C2)
D	4	Diode	1SS355
D	5	Diode	HZS9L(B2)
D	7	Diode	HZS4LL(B)
D	9	Diode	1SR139-400
D	14	Diode	HZM6.2ZMWA
D	25	Diode	1SS355
D	29	Diode	HZM6.2ZMWA
D	30	Diode	HZS22L(1)
L	1	Choke Coil 530µH	CTH1282
L	2	Inductor	CZT2935
X	1	Radiator 12.583MHz	CSS1601

RESISTORS

=====Circuit Symbol and No.		===Part Name	Part No.
R	1		RS1/16S103J
R	2		RS1/16S0R0J
R	3		RS1/16S124J
R	4		RS1/16S124J
R	5		RS1/16S181J
R	6		RS1/16S181J
R	7		RS1/16S223J
R	8		RS1/16S223J
R	9		RS1/16S102J
R	10		RS1/16S102J
R	11		RS1/16S223J
R	12		RS1/16S223J
R	13		RS1/16S473J
R	14		RS1/16S473J
R	15		RS1/16S473J
R	16		RS1/16S562J
R	17		RS1/16S123J
R	18		RS1/16S912J
R	19		RS1/16S473J
R	20		RS1/16S473J
R	21		RS1/16S473J
R	22		RS1/16S123J
R	23		RS1/16S562J
R	24		RS1/16S473J
R	25		RS1/16S821J
R	26		RS1/16S821J
R	27		RS1/16S101J
R	28		RS1/16S101J
R	29		RS1/16S103J
R	30		RS1/16S333J
R	31		RS1/16S102J
R	32		RS1/16S103J
R	34		RS1/16S912J
R	35		RS1/16S473J
R	36		RS1/16S104J
R	37		RS1/16S473J
R	38		RS1/16S473J
R	39		RS1/16S103J
R	43		RS1/16S0R0J
R	44		RS1/16S222J
R	45		RS1/16S622J
R	46		RS1/16S0R0J
R	47		RS1/16S101J
R	48		RS1/16S104J
R	49		RS1/16S223J
R	50		RS1/16S0R0J
R	51		RS1/16S102J
R	52		BPR26CR39J
R	53		RS1/16S0R0J
R	54		RS1/16S101J
R	55		RS1/16S104J
R	56		RS1/16S103J
R	58		RS1/16S473J
R	59		RS1/16S473J
R	60		RS1/16S222J
R	61		RS1/16S103J
R	62		RS1/16S473J
R	63		RS1/16S103J
R	64		RS1/16S473J
R	65		RS1/16S473J

=====Circuit Symbol and No.		===Part Name	Part No.
R	66		RS1/16S104J
R	67		RS1/16S472J
R	70		RS1/16S0R0J
R	72		RS1/16S514J
R	73		RS1/16S393J
R	74		RS1/16S102J
R	75		RS1/16S102J
R	76		RS1/16S102J
R	77		RS1/16S102J
R	80		RS1/16S103J
R	82		RS1/16S102J
R	83		RS1/16S133J
R	84		RS1/16S0R0J
R	86		RS1/16S0R0J
R	87		RS1/16S0R0J
R	88		RS1/16S102J
R	89		RS1/16S102J
R	91		RS1/16S102J
R	94		RS1/16S473J
R	97		RS1/16S473J
R	98		RS1/16S124J
R	99		RS1/16S103J
R	100		RS1/16S223J
R	101		RS1/16S223J
R	103		RS1/16S102J
R	106		RS1/16S103J
R	107		RS1/10S220J
R	108		RS1/10S220J
R	109		RS1/8S0R0J
R	110		RS1/16S472J
R	111		RS1/16S472J
R	112		RS1/16S104J
R	113		RS1/16S104J
R	114		RS1/8S0R0J

CAPACITORS

=====Circuit Symbol and No.		===Part Name	Part No.
C	1	1000µF/16V	CCH1234
C	2	470µF/16V	CCH1080
C	3		CEAT101M10
C	4		CKSRYB103K50
C	7		CKSRYB104K50
C	8		CEAT1R0M50
C	9		CEAT1R0M50
C	10		CEAT1R0M50
C	11		CEAT1R0M50
C	12		CEALNP100M10
C	13		CEALNP100M10
C	14		CEAT220M10
C	15		CEAT220M10
C	16		CEAT220M10
C	17		CEAT101M10
C	18		CEAT470M10
C	19		CEALNP100M10
C	20		CEALNP100M10
C	21		CEAT470M6R3
C	22		CKSRYB103K50
C	23		CKSRYB102K50
C	24		CKSRYB102K50
C	25		CEAL470M6R3
C	26		CKSRYB103K50
C	27		CKSRYB104K50
C	28		CEAL470M6R3
C	30		CEAT100M35
C	31		CEAT100M35
C	32		CKSRYB104K50
C	33		CEAT101M10
C	35		CKSRYB103K50
C	37		CKSRYB103K50
C	39		CKSRYB103K50
C	41		CEAT1R0M50
C	42		CKSQYB104K50
C	43		CKSRYB104K50
C	44		CKSRYB104K50
C	47		CKSRYB104K50
C	48		CKSRYB104K50
C	49		CKSRYB104K50
C	50		CKSRYB104K50
C	51		CKSRYB104K50
C	52		CKSRYB104K50
C	53		CCSRCH102J50
C	54		CCSRCH102J50
C	59		CEAL4R7M25
C	60		CEAL4R7M25
C	61		CEAL4R7M25
C	62		CEAL4R7M25
C	63		CEAL220M10
C	64		CEAL220M10
C	70		CKSRYB104K50
C	71		CKSRYB104K50
C	72		CEAT101M10
C	73		CKSRYB103K50

6. ADJUSTMENT

Test mode

Test mode is the special mode used for the check of the failure state of an iPod adapter, or isolation of failure with iPod.

●Test mode function

(1) Check of communication between an iPod adapter and a main unit
(2) Check of charge function
(3) Change of test mode cancellation trigger
(4) Check of voice line of an iPod adapter (iPod is required)

<How to enter in the test mode>
By putting a main unit into the test mode, an iPod adapter also enters in the test mode operation.
(The way to enter in the test mode is according to the specification of a main unit.)
Example) In the case of DEH-P6700MP/XN/UC (IP-BUS model) pressing [4] + [6] Key simultaneously Reset
<How to cancel the test mode >
AccOFF/RESET (main unit) cancels the test mode.

Connect an iPod adapter to a main unit and enter in the test mode.

(1) Check of communication between an iPod adapter and a main unit

When switching source of a main unit to EXT (iPod), the following displays appear.

- ● It is possible to check whether communication between an iPod adapter and a IP-BUS is normal.
- ● It is possible to identify which one of "unexpected connection" or "connection in a schedule" the model is in the state of a display.

Display at the time of unexpected connection

i	P	o	d	-	-	0	0

These 8 figures are displayed.

Display at the time of connection in a schedule

*	*	*	*	*	*	0	0

is displayed.

Note * portion may change with models and may be blank.

(2) Check of charge function

When pressing [1] key of 1 - 6 keys of a main unit, it is possible to turn ON/OFF of a charge circuit of the iPod adapter.
By checking ON/OFF of the No. 1 pin of a DOCK connector at the iPod adapter side and a backup power supply in the No. 11 or 12 pin at an iPod side, it is possible to check whether the charge circuit system is running normally.
Since the state of charging is displayed if an iPod is connected, it is also possible to check whether charging is performed normally.

Display sample (in the case of an unexpected connection unit).

i	P	o	d	-	-	0	0

Charge circuit OFF

i	P	o	d	-	-	1	0

Charge circuit ON

(3) Change of test mode cancellation trigger

When pressing [2] key of 1 - 6 keys of a main unit, it is possible to change the cancellation trigger in test mode to either AccOFF or RESET.

Display sample (in the case of a connection unit in a schedule)

*	*	*	*	*	*	0	0

Cancellation trigger Acc OFF

*	*	*	*	*	*	0	1

Cancellation trigger RESET

Although it is not usually used in the service, if setting up accidentally, cancel it by Backup OFF.

(4) Check of voice line of an iPod adapter (iPod is required)

Usually, when iPod is connected, it becomes impossible to use the key of iPod except RESET, but if it enters in this mode, it is possible to operate the other keys.

- An iPod adapter does not check whether the iPod has been connected, and it is possible to operate on an IP-BUS.
- Since communication with an iPod is not performed, a logo (pioneer) is not displayed on the iPod.

Since it is possible to produce a sound by playing an iPod, when the sound of the iPod does not come out from a main unit, it shows that the iPod is out of order.

In the normal mode, since communication of data and charging are performed, a logo (pioneer) and "now charging" are displayed in the window of the iPod.
By checking whether the keys of an iPod are operatable or not, it is possible to see if it is normal or not.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Chassis (Fig.1)**

1 Remove the two screws and then remove the Chassis.

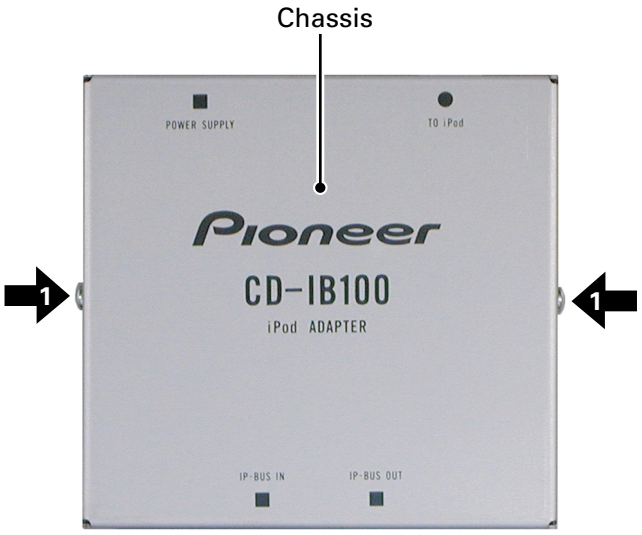


Fig.1

● **Removing the Main PWB Unit (Fig.2)**

1 Straighten the tab at location indicated.

2 Remove the four screws and then remove the Main PWB Unit.

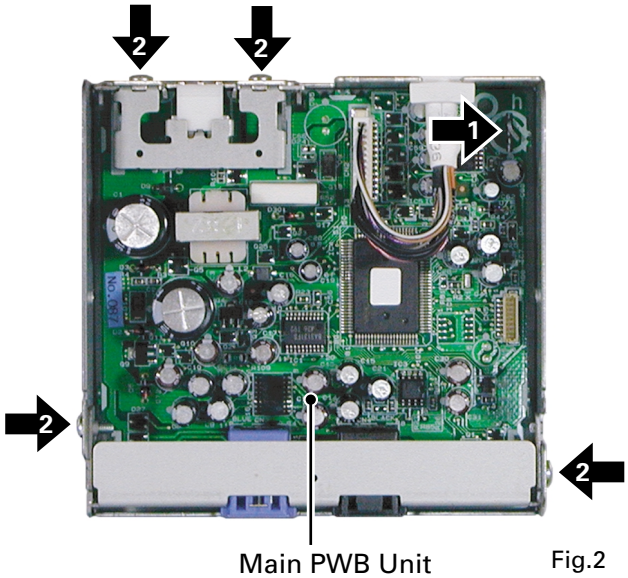
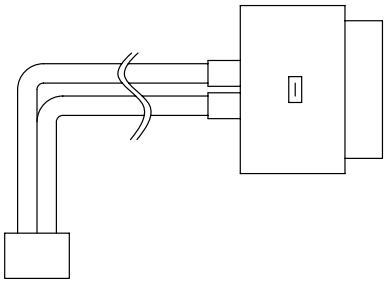
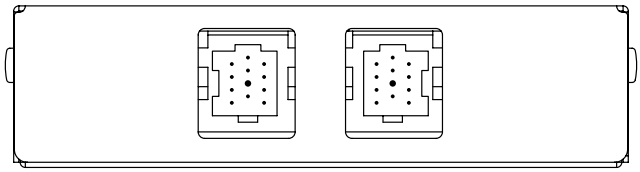
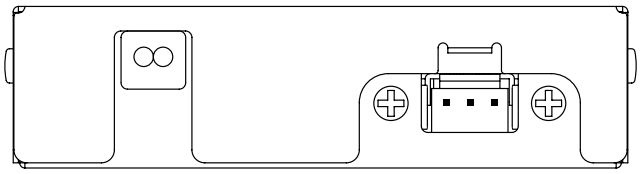


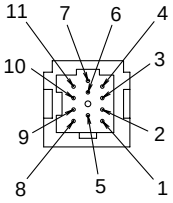
Fig.2

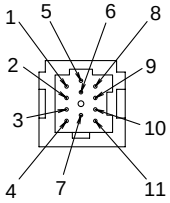
7.1.2 CONNECTOR FUNCTION DESCRIPTION

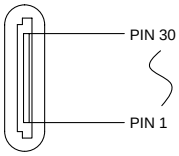


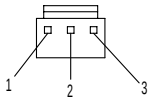












11P CONNECTOR IP-BUS BLUE

1	BUS +
2	BUSG1
3	BUSG1
4	NC
5	BUS -
6	BUSG1
7	BUSL1
8	ASENS
9	BUSR1
10	BUSR2
11	BUSL2

11P CONNECTOR IP-BUS BLACK

1	BUS +
2	BUSG5
3	BUSG5
4	NC
5	BUS -
6	BUSG5
7	BUSL3
8	ASENS
9	BUSR3
10	BUSAG1
11	BUSAG1

CORD ASSY CONNECTOR

1	F/W GND
2	F/W GND
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	ACC ID
11	F/W PWR
12	F/W PWR
13	ACC PW
14	-
15	USB/DGND
16	USB/DGND
17	-
18	DOCK TX
19	DOCK RX
20	USB/DGND
21	-
22	-
23	-
24	-
25	-
26	-
27	AUDIO L
28	AUDIO R
29	AUDIO GND
30	SGND

DC CONNECTOR

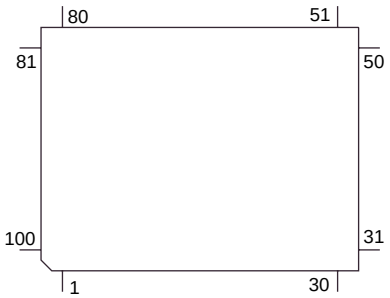
1	GND
2	-
3	B.U

7.2 IC

●Pin Functions (PE5483A)

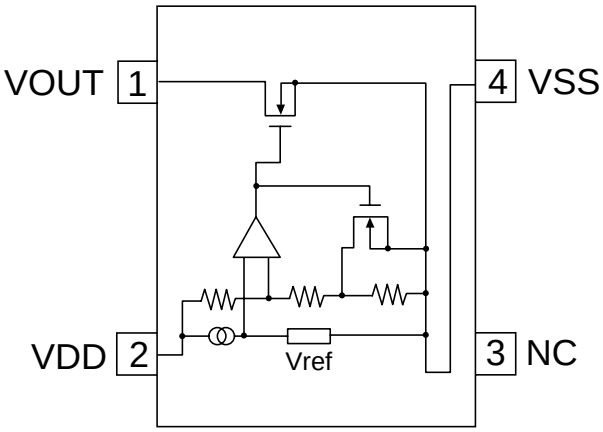
Pin No.	Pin Name	I/O	Function and Operation
1,2	NC		Not used
3	ROMDATA	I/O	ROM data input / output
4-10	NC		Not used
11	$\overline{\text{RESET}}$	I	Chip reset input
12,13	NC		Not used
14	VSS		GND
15	X2		Crystal connection for system clock oscillation
16	X1	I	Crystal connection for system clock oscillation
17	REGOFF		Regulator operation specification signal
18	REGC		Capacity connection for regulator output stability
19	VDD		Power supply
20	MODEL	I	Model select input
21	SYSPW	O	System power control output
22	DALMON	O	System operation situation output
23	NC		Not used
24	IPPW	O	Driver power control output
25	IPSELECT	O	Selector switch output
26	PID	O	Communication mode (UART) notification output
27	NC		Not used
28	MUTE	O	Mute output
29-37	NC		Not used
38	$\overline{\text{PSENSG}}$	I	Connection sense input
39	TESTIN	I	Chip test input
40	VSS		GND
41	VDD		Power supply
42,43	NC		Not used
44	PPOWER	O	Power control output
45-64	NC		Not used
65	TESTSCK	O	Serial clock output
66	TESTSI	I	Serial data input
67	TESTO	O	Serial data output
68-72	NC		Not used
73	IC	I	GND
74-81	NC		Not used
82	AVDD		Power supply for A/D converter
83	AVREF1		Standard voltage for A/D converter
84	AVSS		GND for A/D converter
85	RX	I	Data input (IE-BUS)
86	TX	O	Data output (IE-BUS)
87	$\overline{\text{NMI}}$	I	NMI input
88,89	NC		Not used
90	$\overline{\text{PSENS}}$	I	Connection sense input
91	NC		Not used
92	$\overline{\text{ASENS}}$	I	ACC sense input
93	$\overline{\text{BSENS}}$	I	Backup sense input
94	NC		Not used
95	RXIPOD	I	Serial data input
96	TXIPOD	O	Serial data output
97-100	NC		Not used

*PE5483A

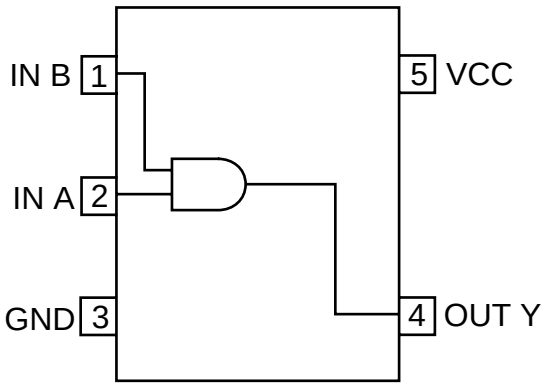


IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

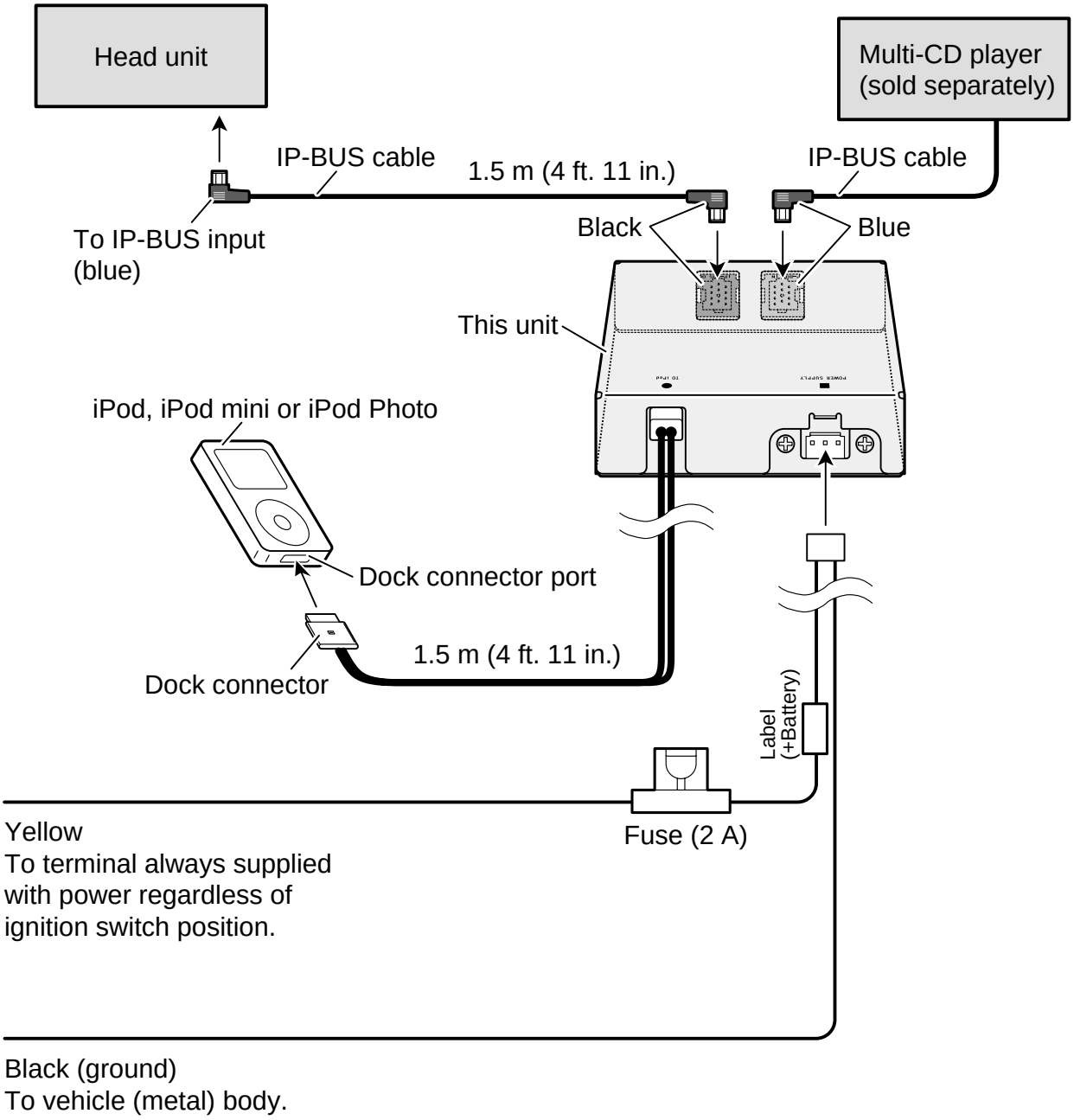
PST3433UL



TC7SET08FUS1, TC7SH08FUS1



8. OPERATIONS



About this manual

Operate this unit with the connected head unit. Instructions in this manual use AVH-P5700DVD (AVH-P5750DVD) as an example of head unit.

We recommend that you familiarize yourself with the functions and their operation by reading through the manual before you begin using this unit. It is especially important that you read and observe **WARNING**s and **CAUTION**s in this manual.

About handling the iPod

CAUTION

- Pioneer accepts no responsibility for lost data on the iPod even if that data is lost while using this unit.
- Do not allow direct sunlight to fall on the iPod when it is not being used. Extended exposure to direct sunlight can result in iPod malfunction due to the resulting high temperatures.
- Do not leave the iPod in high temperatures or direct sunlight.
- Fix the iPod securely when using with this unit. Do not let the iPod fall onto the floor, where it may become jammed under the brake or accelerator pedal.

For details, refer to the iPod's manuals.

About iPod settings

- You cannot operate the iPod Equalizer on the Pioneer products. We recommend that you set the iPod Equalizer to off, before connecting the iPod to this unit.
- You cannot set Repeat to off on the iPod when using this unit. Even if you set Repeat to off on the iPod, Repeat is changed to All automatically when connecting the iPod to this unit.
- The Shuffle function of the iPod is operated as Random on the Pioneer products.

Connecting and disconnecting the iPod

● **Connect the iPod to this unit.**

As soon as the iPod is connected, its power is automatically turned on.

While the iPod is connected to this unit, **PIONEER** (or ✓ (check mark)) is displayed on the iPod.

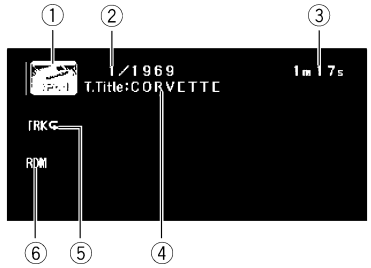
- When the ignition switch is set to ACC or ON, the iPod's battery is charged while the iPod is connected to this unit.
- While the iPod is connected to this unit, the iPod itself cannot be turned on or off.

■ The iPod connected to this unit is turned off about two minutes after the ignition switch is set to OFF.

● **Remove the iPod from this unit.**

When removing the iPod from this unit, the iPod main menu is displayed after a few seconds.

Listening to songs on iPod



① **Source icon**
Shows which source has been selected.

② **Song number indicator**
Shows the number of song played in the selected list.

③ **Play time indicator**
Shows the elapsed playing time of the current song.

④ **Song title indicator**
Shows the title of the currently playing song.

⑤ **Repeat indicator**
Shows when repeat range is selected to current track.

⑥ **RDM indicator**
Shows when random play is set to **TRACK** or **ALBUM**.

1 Touch the source icon and then touch iPod to select the iPod.

■ You can also select the iPod as a source by pressing **SOURCE** repeatedly.

■ When the iPod is not connected to this unit, you cannot select the iPod as a source.

2 Touch the screen to display the touch panel keys.

3 To skip back or forward to another song, touch ⏮ or ⏭.

Touching ⏭ skips to the start of the next song. Touching ⏮ once skips to the start of the current song. Touching it again will skip to the previous song.

■ You can also skip back or forward to another song by pressing ◄ or ►.

4 To perform fast forward or reverse, keep touching ⏮ or ⏭.

■ You can also perform fast reverse/fast forward by pressing and holding ◄ or ►.

Browsing for a song

The operation of this unit to control iPod is designed to imitate iPod operation. This allows you to search and play songs as you operate with iPod.

1 Touch TOP to display the top menu.

2 Touch one of the categories in which you want to search for a song.

- **PLAYLISTS** (playlists)
- **GENRES** (genres)
- **ARTISTS** (artists)
- **ALBUMS** (albums)
- **SONGS** (songs)

3 Touch a list title that you want to play.

Repeat this operation until you find the desired song.

■ You can start playback throughout the selected list if you keep touching a list title.

■ To go to the next group of list titles, touch ⏬.

■ To return to the previous group of list titles, touch ⏫.

■ To return to the previous menu, touch ⮌.

■ To go to the top menu of the list search, touch **TOP**.

Pausing a song

Pause lets you temporarily stop playback of a song.

● **Touch ►/II during playback.**
PAUSE appears in the display.
■ To resume playback at the same point that you turned pause on, touch ►/II again.
■ You can also turn pause on or off by pressing **PGM**.

Displaying text information on iPod

Text information recorded on the iPod can be displayed.

● **Touch DISP.**
Touch **DISP** repeatedly to switch between the following settings:
T. Title (song title)—**Artist** (artist name)—**Album** (album title)
■ If the characters recorded on the iPod are not compatible with a head unit, those characters will not be displayed.

Note

You can scroll to the left the title by keeping touching **DISP**.

Repeating play

For playback of the songs on the iPod, there are two repeat play ranges: **TRACK** (repeat one song) and **ALL** (repeat all songs in the list).

- While **REPEAT** is set to **TRACK**, you cannot select the other songs.

1 Press A.MENU and then touch FUNC to display the function names.

2 Touch REPEAT to select the repeat range.
Touch **REPEAT** repeatedly until the desired repeat range appears in the display.

- **TRACK** – Repeat just the current song
- **ALL** – Repeat all songs in the list

Playing songs in a random order (shuffle)

For playback of the songs on the iPod, there are two random play methods: **TRACK** (play back songs in a random order) and **ALBUM** (play back albums in a random order).

1 Press A.MENU and then touch FUNC to display the function names.

2 Touch RANDOM to select the random play method.
Touch **RANDOM** repeatedly until the desired random play method appears in the display.

- **TRACK** – Play back songs in a random order within the list
- **ALBUM** – Select an album randomly, and then play back all the songs in it in order